



Nombre de alumno:

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Nombre del profesor: Arq. Pedro alberto García

Nombre del trabajo: momento de inercia en superficies

Materia: estática para la arquitectura

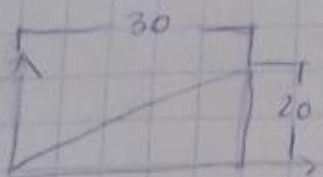
Grado: 3-^o Cuatrimestre

Grupo: "A"

$$I_y = \frac{bh^3}{36}$$

Plataforma

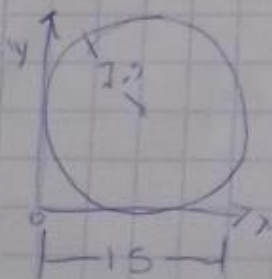
$$I_y = \frac{b^3h}{36}$$



$$I_x = \frac{30 \text{ cm} (20 \text{ cm})^3}{36} = \frac{240,000 \text{ cm}^4}{36}$$

$$= 6666.66 \text{ cm}^4$$

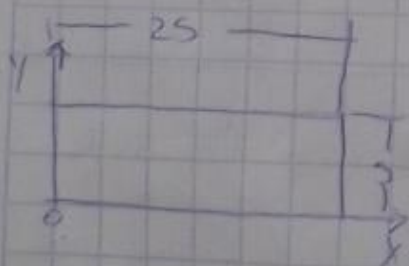
$$I_y = \frac{(30 \text{ cm})^3 20 \text{ cm}}{36} = \frac{540,000 \text{ cm}^4}{36} = 15,000 \text{ cm}^4$$



$$I_x = I_y = \frac{\pi R^4}{4}$$

$$\frac{3.1416 \cdot (7.5 \text{ cm})^4}{4} = \frac{9,940.218 \text{ cm}^4}{4}$$

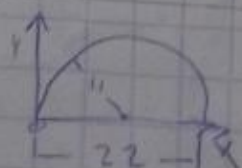
$$= 2,485.054 \text{ cm}^4$$



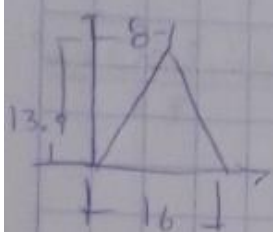
$$I_y = \frac{25 \text{ cm} (5 \text{ cm})^3}{12} = \frac{3125 \text{ cm}^4}{12}$$

$$= 260.416 \text{ cm}^4$$

$$I_y = \frac{(25 \text{ cm})^3 (5 \text{ cm})}{12} = \frac{78,125 \text{ cm}^4}{12} = 6,510.41 \text{ cm}^4$$



$$I_x = 0.1098 (11 \text{ cm})^4 = 1607.58 \text{ cm}^4$$

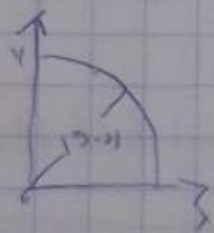


$$I_y = \frac{16 \text{ cm} (13.9 \text{ cm})^3}{36} = \frac{412,469.90 \text{ cm}^4}{36}$$

$$= 11,193.608 \text{ cm}^4$$

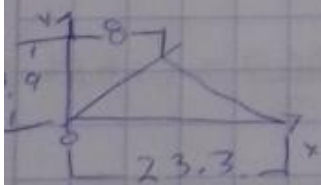
$$I_y = \frac{(16 \text{ cm})^3 \cdot 13.9 \text{ cm}}{98} = \frac{59,9321.40 \text{ cm}^4}{48}$$

$$= 1186.133 \text{ cm}^4$$



$$I_x = I_y = 0.02188 (13.4 \text{ cm})^4$$

$$= 1,769.4296 \text{ cm}^4$$



$$I_x = \frac{23.3 \text{ cm} (8.9 \text{ cm})^3}{36} = \frac{16,425.77}{36}$$

$$= 456.271 \text{ m}^4$$

$$I_y = \frac{23.3 \text{ cm} (3.8 \text{ cm})}{3} \left[(8 \text{ cm})^2 - (8 \text{ cm} \times 23.3 \text{ cm}) + (23.3)^2 \right]$$

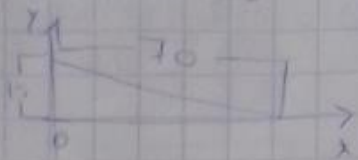
$$= 29.513 \text{ cm}^2 (64 \text{ m}^2 - 186.4 \text{ cm}^2 + 542.89 \text{ cm}^2)$$

$$= 29.513 \text{ cm}^2 (420.49 \text{ cm}^2)$$

$$= 12,409.921 \text{ cm}^4$$

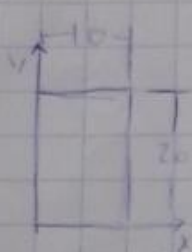
$$= 23,412.367 \text{ cm}^4$$

$$I_x = \frac{bh^3}{36} \quad I_y = \frac{b^3h}{36}$$



$$I_x = \frac{70 \text{ cm} (15 \text{ cm})^3}{36} = \frac{236,250 \text{ cm}^4}{36} = 6,562.50 \text{ cm}^4$$

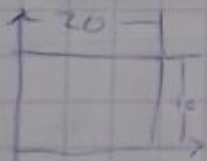
$$I_y = \frac{(70 \text{ cm})^3 15 \text{ cm}}{36} = \frac{5,145,000 \text{ cm}^4}{36} = 142,916.66 \text{ cm}^4$$



$$I_x = \frac{bh^3}{12} \quad I_y = \frac{b^3h}{12}$$

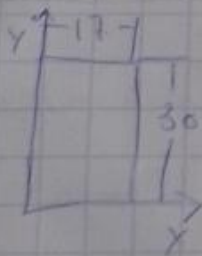
$$I_x = \frac{10 \text{ cm} (20 \text{ cm})^3}{12} = \frac{80,000}{12} = 6,666.66 \text{ cm}^4$$

$$I_y = \frac{(10 \text{ cm})^3 20 \text{ cm}}{12} = \frac{20,000}{12} = 1,666.66 \text{ cm}^4$$



$$I_x = \frac{20 \text{ cm} (10 \text{ cm})^3}{12} = \frac{20,000}{12} = 1,666.66 \text{ cm}^4$$

$$I_y = \frac{(20 \text{ cm})^3 10 \text{ cm}}{12} = \frac{80,000}{12} = 6,666.66 \text{ cm}^4$$



$$I_x = \frac{17 \text{ cm} (30 \text{ cm})^3}{12} = \frac{459,000}{12} = 38,250 \text{ cm}^4$$

$$I_y = \frac{(17 \text{ cm})^3 30 \text{ cm}}{12} = \frac{147,390}{12}$$

$$= 12,282.50 \text{ cm}^4$$